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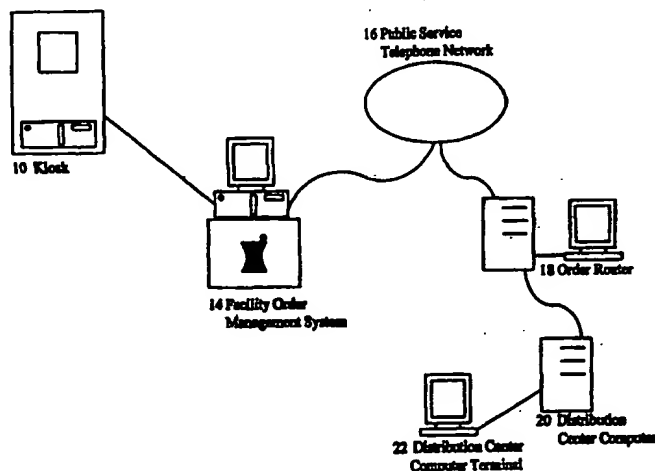
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(54) Title: SYSTEM FOR AUTOMATED PROCESSING OF HEALTH CARE CUSTOMER PURCHASE ORDERS



(57) Abstract

A system is disclosed for processing customer orders for specialty and general health care items. A customer places an order by selecting items from an electronic catalog (10) located at a health care provider facility such as a pharmacy, a hospital, a doctor's office, or a clinic. The order is sent to an order management system (14) where it may be stored with the facility's regular purchase orders for prescription and non-prescription items that the facility regularly stocks. Purchase orders are then transmitted to one or more distribution centers computers (20) where they are processed and filled. Arrangements may be made for next-day delivery of customer orders so that customers receive their ordered items within one or two days of placing an order, at their home or health care provider location.

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## SYSTEM FOR AUTOMATED PROCESSING OF HEALTH CARE CUSTOMER PURCHASE ORDERS

### FIELD OF THE INVENTION

The field of the invention relates to a system and method for automated placing and processing of health care customer purchase orders. More specifically, the present invention relates to a system and method for processing customer purchase orders for specialty and regular health care merchandise through one or more distribution center computers that  
5 assist employees of the distribution centers in filling the orders.

### BACKGROUND OF THE INVENTION

In an effort to expand the scope of services and amenities available to their patients (i.e., customers), many health care provider facilities (e.g., clinics, retail pharmacies, hospitals, doctor's offices, etc.) have started stocking and offering to sell to their customers  
10 health care related items. For example, many ophthalmologists have co-located at their offices eyeglass and contact lens dispensing facilities so that patients who need corrective lenses may select and purchase them immediately following their eye examinations. Many hospitals today have retail shops in them so that patients who are in need of non-prescription items that may help them in their recovery may purchase them while in the hospital or upon  
15 their discharge. Specialty clinics such as sports medicine clinics may also offer for sale health care related items (e.g., heating pads) that may assist patients in their recovery from sports-related injuries. The ability to purchase health care related items in conjunction with a visit to a health care provider facility may result in significant time-savings for patients of the facility.

20 Health care provider facilities, however, are physically limited in the amount of specialty health care as well as general health care products they can stock and display for

their customers. Many specialty health care items such as canes, crutches, blood pressure monitors, etc. require a significant amount of floor space. General health care merchandise such as nutritional supplements, soaps, bandages, over-the-counter medications, etc. also consume a significant amount of floor space. A health care provider facility must consider

5 the physical space requirements (as well as other factors such as turn-over) when deciding what merchandise to stock. Even health care provider facilities such as pharmacies or optical clinics located in larger retail department stores or hospital complexes have physical space limitations. A facility may decide to stock large quantities of a few items or small quantities of many items or use a combination of the two approaches depending on sales

10 history, projected demand, etc. for the merchandise. Significant overhead costs may be incurred depending on which products the facility chooses to stock. Furthermore, a facility is always at risk of losing sales of customers who request an item that is not in stock and that cannot be obtained quickly and easily.

A customer who needs a specialty health care item—for example, lightweight metal

15 crutches—that pharmacies, for example, generally choose not to stock may be inconvenienced in several ways. First, the customer may be inconvenienced simply because she cannot find the crutches she needs and may instead be forced to use an inferior substitute. Second, considerable time may be spent trying to find a pharmacy that has the crutches in stock. If the pharmacy that has the item is far away from the customer,

20 significant time, expense, and effort may be required to get the item to the customer or for the customer to get the item from the pharmacy. If the crutches are simply unavailable locally, a special order may need to be placed for shipment directly from the manufacturer and considerable time may be spent waiting for the order to be placed and for the crutches to arrive.

A customer who knows he needs an item—for example, a heating pad—but does not know which one will best suit his needs, may find his options limited simply because the sports medicine clinic he goes to is unable to stock all of the available types and brands. If the customer needs the item quickly, he may choose only from the items the clinic decided to stock. The customer may discover that other clinics or pharmacies in his area stock different types and brands so the customer may be required to make a number of trips to the different facilities to really learn what his options are. In investigating his options, the customer may learn that there is a manufacturer who makes a heating pad that will suit his needs, but none of the facilities in the area stock it. The customer may be given the option of placing a special order with the manufacturer of the item, but he will likely be required to wait a considerable amount of time before it arrives. The customer may decide to compromise and accept an inferior in-stock heating pad simply because he cannot wait for the heating pad that best suits his needs.

Many health care customers today have a need to purchase certain specialty health care products on a periodic basis (e.g., nutritional supplements, disposable contact lenses). Such products may be consumed at a nearly constant rate (e.g., daily, weekly, etc.) Consequently, a customer has a need to replenish her supply of the product at a known or predictable interval. The customer who needs to replenish her supply has two options. First, the customer may go to a pharmacy or other facility that ordinarily stocks the product and hope that the needed item is currently in-stock. If the customer's usual pharmacy does not ordinarily stock the product, the customer's second option is to arrange, through the pharmacy or another facility, for a special order of the item from the manufacturer and hope that it arrives before she really needs it. If the customer waits too long to special order the item, she may have to do without the item for a significant period of time. The

manufacturers or suppliers who fill the special orders may have different delivery times making it difficult for customers and pharmacies or other health care facilities to predict the lead time needed to fill special orders.

The inability of health care provider facilities—due to physical constraints—to stock  
5 all of the specialty and general health care products their customers may need results in significant financial burdens to facilities in the form of lost sales. Health care provider facilities therefore have a need to make available to customers specialty health care as well as general health care products that due to physical and economic constraints (or other constraints), the facility cannot stock. There is a need for a system that allows a health care  
10 customer to quickly and easily obtain specialty health care as well as general health care products that the customer's usual facility does not stock or for which the stock has been depleted. There is also a need for a system that allows a health care provider facility customer to arrange to order health care products automatically at a regular interval.

#### SUMMARY OF THE INVENTION

15 The present invention is a system and method for automated placing of a customer purchase order and processing of the order through an order management system. In a preferred embodiment of the present invention, a customer order is placed through a computer kiosk located in a health care provider facility such as a pharmacy, a hospital, a specialty clinic, doctor's office, etc. The kiosk contains a touchscreen with which the  
20 customer interacts to peruse an electronic catalog of specialty and regular health care products from a variety of vendors. The customer may order any of the items presented on the screen and may order more than one item. The customer may also place a "subscription" order so that the selected item is re-ordered at a regular interval (e.g., weekly, monthly, bi-monthly, etc.) After the customer has selected all of the items that he or she would like to

order, the customer provides an acknowledgment (e.g., by selecting an "order" button). A receipt summarizing the order and with an order number is then printed for the customer.

Following the customer's acknowledgment, the order is sent to or retrieved by a computer-based order management system located at the kiosk computer, at a remote  
5 computer located at the facility, or at a remote computer outside the facility. The customer then arranges to pay for the ordered items (e.g., with cash or by credit card.) A cashier or another employee of the facility accesses the order using the order number on the receipt (or alternatively, the customer's name, an account number, etc.) and processes the customer's payment. The customer may also request that the ordered items be delivered to the  
10 customer's home rather than the facility. The customer's order is then stored at the order management system for processing at a later time, possibly in conjunction with the facility's regular purchase orders. The facility's regular purchase orders include those orders for items (e.g., prescription and non-prescription items) that the facility ordinarily stocks. For example, a sports medicine clinic may stock many types of pain relievers, bandages, and  
15 walking supports. A retail pharmacy may stock an extensive array of pharmaceuticals and a few types of home health care items. In contrast to customer purchase orders in which small quantities of items are requested, the quantities of items that the health care provider facility requests in its regular purchase orders may be very large.

In a preferred embodiment of the present invention, the customer purchase orders  
20 that are stored at the facility's order management system are processed on a daily basis. The purchase orders are sent next to an order routing computer. The order routing computer may be equipped with routing information (e.g., a look-up table) for computers located at distribution centers throughout the country. In addition to receiving customer purchase order information, the order routing computer receives information (such as an identifier)

regarding the facility from which the customer purchase orders are sent. The order routing computer then uses the information to locate a distribution center computer to which the customer and/or regular purchase orders may be routed and then filled. The distribution center to which the orders are routed warehouses the specialty and general health care products a customer may order as well as the other items that the facility orders on a regular basis. The orders are then processed through the distribution center computer. Products for customer orders may be sent to the facility through which they were ordered or if requested, they may be sent to the customer's home. In a preferred embodiment of the present invention, the customer's ordered items are delivered to the customer's home or the facility within 24 to 48 hours depending on the delivery time of the service. If the customer orders are processed in conjunction with the facility's regular purchase orders, arrangements are made to deliver the regular purchase order items to the facility.

Using the present invention, customer orders for specialty and general health care products are processed through an order management system. The order management system may be co-located at the kiosk computer, at a remote computer located at the facility, or at a remote computer outside the facility. A facility's regular purchase orders may also be processed through the order management system. When both types of orders are processed through the same system, significant operating efficiencies result. Alternatively, the facility's regular purchase orders may be processed through a separate order management system located at the facility or at a remote location. Whether customer orders and regular orders are processed through the same order management system or through independent systems, the present invention provides virtual floor space to the facility. Customers may peruse the electronic catalog and learn as much about the items as they would if the items were actually in the facility. The facility fills customer orders almost as quickly as it would



if the items were in stock. Health care provider facility customers benefit from the quick and efficient location and delivery of the specialty and general health care items they need. Health care provider facilities benefit from the ability to offer a larger selection of specialty and general health care items without actually stocking them. These benefits and other  
5 advantages may be understood in relation to the following drawings and description.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a system organization diagram for a preferred embodiment of the present invention;

Figure 2 is a screen shot of a customer purchase order file for a preferred  
10 embodiment of the present invention;

Figure 3 is a screen shot of a main menu for a preferred embodiment of the present invention;

Figure 4 is a screen shot of purchase order partition form for a preferred embodiment of the present invention;

15 Figure 5 is a screen shot of a purchase order selection form for a preferred embodiment of the present invention;

Figure 6 is a screen shot of a purchase order edit form for a preferred embodiment of the present invention;

20 Figure 7 is a screen shot of a customer order main menu for a preferred embodiment of the present invention;

Figure 8 is a screen shot of a customer order selection form for a preferred embodiment of the present invention;

Figure 9 is a screen shot of a customer order form for a preferred embodiment of the present invention;

Figure 10 is a screen shot of a customer information entry form for a preferred embodiment of the present invention;

Figures 11A and 11B are a flow diagram of the primary steps for a preferred embodiment of the present invention;

5        Figure 12 is a screen shot of an electronic catalog page for a preferred embodiment of the present invention;

Figure 13 is a screen shot of an electronic catalog item page for a preferred embodiment of the present invention; and

10       Figure 14 is a screen shot of an electronic catalog item order page for a preferred embodiment of the present invention.

#### DETAILED DESCRIPTION OF PREFERRED EMBODIMENT(S)

Referring to Figure 1, the present invention may be embodied in a networked computer system as shown in the system organization diagram for a preferred embodiment. An electronic catalog of specialty and regular health care products from a variety of vendors  
15    is available through a kiosk 10 located in a health care provider facility. Health care provider facilities provide health related services to patients (i.e., customers) and may include retail pharmacies, hospital pharmacies or shops, extended care facilities, doctor's offices, specialty clinics such as sports medicine clinics, cancer clinics, ophthalmology clinics, acute care or emergency clinics, obstetrics and gynecology clinics, occupational and  
20    physical therapy clinics, sleep clinics, etc. Preferably, a computer in the kiosk contains the electronic catalog and a touchscreen interface/graphical user interface is available to peruse the items in the catalog. The items in the electronic catalog may be stored in a database at the kiosk computer—for example, on a hard disk, a floppy disk, or a CD. Preferably, the kiosk computer is equipped with a printer so a user may print information leaflets or obtain a

receipt for ordered items and facility personnel may print reports regarding system usage, etc. Finally, the kiosk computer is equipped with a network adapter (or card) and cable (or connector) or alternatively, a modem, so it may communicate with other computers in the system of the present invention.

5 In a preferred embodiment of the present invention, several application programs that are operative in the Microsoft® Windows environment execute on the kiosk computer to provide the features and functionality of the present invention. The kiosk computer may thus be an IBM or IBM-compatible personal computer. The present invention, however, is not limited to any particular computer or windowing system and may be embodied on a  
10 variety of platforms including Apple Computer Macintosh, UNIX, etc. Both end-user (i.e., clinic or pharmacy customer) and system maintenance application programs may reside on the kiosk computer. The application programs may include an electronic catalog interface program (for an end-user to interact with the electronic catalog), a touchscreen calibration program for maintaining the touchscreen, a report generation program for printing system  
15 usage reports, a leaflet header modification program for changing the message that appears on the headers of information leaflets that may be printed at the kiosk, and a setup/view swapfile program for maintaining a file that contains customer order information. In addition, an order management system may be resident on the kiosk computer.

Following a customer acknowledgment, customer orders are processed through an  
20 order management system. An order management system may be co-located at the kiosk computer, at a remote computer located at the facility, or at a remote computer located outside the facility such as at a distribution center. An order management system may have different features and functionality depending on its location and whether it processes customer and regular purchases orders or one of the two types of purchase orders. Referring

again to Figure 1, in a preferred embodiment of the present invention, an order for one or more items in the catalog is transmitted from the computer in the kiosk 10, through a local area network connection 12, to a remote order management system 14 located at the health care provider facility. In an alternative embodiment of the present invention, the order management system may be co-located with the electronic catalog interface program so that the local area network connection is not needed. In this embodiment of the present invention, the kiosk computer may be equipped with a modem so customer orders may be transmitted directly to a distribution center computer. In the preferred embodiment of the present invention, the facility order management system 14 computer is equipped with a network adapter (or card) and cable (or connector) and/or a modem so it may communicate with other computers in the system of the present invention (e.g., the kiosk computer and order routing or distribution center computer.)

Regardless of the computer's location, the order management system assists a facility in processing customer purchase orders for specialty and regular health care products. Preferably, the application program that executes on the order management system computer is operative in the Microsoft® Windows environment or the DOS environment. The order management system may thus be implemented on an IBM or IBM-compatible personal computer. The order management system preferably, contains a primary set of features such as providing for retrieval of orders from a kiosk computer, review, and editing of purchase orders as well as entry of customer information such as name, address, and insurance or payment plan information.

In an alternative embodiment of the present invention, in addition to facilitating the processing of customer purchase orders, the order management system facilitates ordering for items that the facility stocks on a regular basis. In addition to primary features for

processing of customer purchase orders, the order management system may contain a sophisticated set of features to allow entry, review, and editing of purchase orders for items that the facility stocks regularly. The order management system may facilitate purchases of prescription (including narcotics) and non-prescription items as well as track purchase history, provide suggestions regarding quantities of an item to be ordered, generate detailed reports, etc. Preferably, the regularly stocked items include both prescription and non-prescription items so the facility may manage all regular stock purchases from a single system.

In an embodiment of the present invention in which customer purchase orders and a facility's regular purchase orders are processed through the same order management system, the order management system application program is forms-based such that a user enters information regarding purchase orders, etc., in fields that appear on each form. Preferably, the order management system has a database containing product and pricing information for brand-name and generic prescription and non-prescription drugs as well as health and beauty care items. Purchase orders may then be generated from items in the database by entering item identifiers and quantities in fields on an order entry form. Preferably, a purchase history is kept that may assist the facility in future purchasing decisions. For example, the system may calculate an average weekly usage (AWU) for a particular item so the facility may order a quantity consistent with the AWU. The system may also review the purchase history and suggest a quantity to be ordered.

Customer orders may be transferred from the kiosk computer to the order management system in several ways. If the electronic catalog application and order management system application are resident on the same computer, a single, resident file

may be used to transfer information (e.g., customer order information) between the applications.

In another embodiment of the present invention, customer orders may be transferred from the kiosk computer to a remote order management system computer using peer-to-peer  
5 networking/file sharing capabilities supported by the Microsoft® Windows environment. In this embodiment, customers orders are stored in an ASCII file format on the hard disk of the kiosk computer (e.g., in a file on the kiosk computer C: drive named *customer\orders.txt*.) Using standard file sharing capabilities that are available through the operating system, the directory *customer* and file *orders.txt* may be configured to be accessible from the order  
10 management system computer. The directory *customer* may be designated from the kiosk computer to be a shared resource with a share name of, for example, *customer*. The file *orders.txt* may then be accessed from the remote order management system computer using the name of the kiosk computer and connecting the directory with the share name *customer*. Application programs executing on the remote order management system may then access  
15 the customer orders stored in *customer\orders.txt* by calling a standard file open routine. Using the standard networking/file sharing capabilities present in the operating system, a remote ASCII file containing customer orders may be accessed from an order management system application program in the same manner as a local file. The order management system application program is designed to understand the remote file format so it may open,  
20 read information from, and close the file.

Preferably, the order management system application program polls the shared drive periodically to check for new orders. For example, the order management system application program may use standard operating system calls to check the modification date and/or time of the ASCII file. If the date/time has changed since the last check, the order

management system may notify a user of the order management system that customer orders are present. The notification may be in the form of a brief message that is displayed at the bottom of the screen that is currently displayed. The user may then return to a main menu of the order management system to select an order entry or order processing function in the application program to review and process the new customer orders.

In an embodiment of the present invention in which file sharing is the communication mechanism between the kiosk computer and order management system computer, the ASCII file format is of the form shown in Figure 2. This file, as shown in a screen shot 20, may be generated by the customer order processing program that executes on the kiosk computer. The first line of the file 22 identifies the file as an "Import Data File" indicating the data in the file may be imported to the order management system. The second line in positions 01 and 02 24 identifies the purchase order record. Positions 03 through 14 of the second line represent the Purchase Order Number that may be associated with an Order Entry partition selected earlier. The second and subsequent item entry lines 26 may include in positions 01 and 02 an item number identified by the letters "IT." Positions 03 through 08 represent an item entry number. One of several item entry number types may be used such as a number internal to the order management system, a number defined by the facility, or a National Drug Code (NDC) number under the National Drug Code System of the Food and Drug Administration. Finally, positions 09 through 11 may represent a 3-digit quantity. The last line of the file 28 may be used for an optional, internal comment. Position 01 of the line may contain a semi-colon (;) indicating the rest of the line is a comment. Positions 02 through 128 may contain the text of the comment associated with the file. Preferably, this line is not processed by the order management system.

In an alternative embodiment of the present invention, standard Remote Procedure Call (RPC) capabilities that are available in Microsoft® Windows for developing distributed applications may be used to transfer customer orders from the kiosk computer to a remote order management system computer. Using these capabilities, the kiosk computer and order management system application programs may be designed in accordance with the standard message passing facility of RPC to minimize the exchange of information and to hide customer order file system/file format details from the order management system. The use of standard RPC capabilities allows two applications that are implemented on different computers with different operating platforms to communicate with one another. In addition, the exchange of information between applications may occur even though the computers have different file systems. The RPC approach differs from the file sharing approach in at least two ways. First, the resource sharing steps are not needed. Second, the order management system application is not required to understand details regarding the file format of the customer order file. A modification may be made to the kiosk computer or order management system application without affecting the other application.

Referring again to Figure 1, in an embodiment of the present invention in which customer orders are transmitted from the kiosk computer to a remote order management system located at the health care provider facility, customer orders may be accessed in accordance with an order number, an account number, the customer's name, etc. A cashier or facility employee may access the customer order, enter additional information about the customer such as an address and telephone number, and record the customer's payment for the ordered item(s). Following payment for the items in the order, the customer order may be forwarded and processed through a computer that routes customer orders (i.e., an order router) to appropriate distribution center computers. A distribution center computer may be



selected based on an identifier for the facility that sends the orders to the order routing computer.

When the items on the purchase orders are ready to be processed, the orders are transmitted from the order management system 14 through the public service telephone network 16 (via a modem, for example) to a computer or server that routes orders 18 to an appropriate distribution center computer 20. The transmission from the order management system to the order routing computer may be accomplished using commercially available communications software and programs or scripts that process order information contained in one or more files on the order management system. The process of transferring information contained in files from one computer to another through the public service telephone network is well-known in the art and not explained herein. Although customer purchase orders may be transmitted directly from an order management system to a distribution center computer, they are preferably transmitted through a computer or server that routes them to the appropriate location as distribution centers may be established throughout the country. Using the order routing computer, no changes to the order management system computer or application are necessary if a different distribution center is used to service a particular facility. More than one server may be configured to accept purchase order information from health care provider facilities located in a particular region of the country. For example, one server may route orders to distribution centers located in eastern portions of the country while another server routes orders to distribution centers located in western portions of the country. A private WAN connection (e.g., BiSync, X.25 or TCP/IP) or another type of public WAN connection is preferably used for transmitting purchase orders from the order routing computer 18 to the distribution center computer 20. Employees at the distribution center may interact with one or more distribution center

computers via computer terminals 22 located throughout the center. In one embodiment of the present invention, each distribution center may stock prescription and non-prescription items as well as specialty and general health care and beauty products from a large number of vendors so that all regular and customers orders from a health care provider facility may  
5 be filled directly through the distribution center.

In another embodiment of the present invention, items for customer purchase orders and regular facility purchase orders may be warehoused at different distribution centers. Purchase orders are then directed by an order router to the appropriate distribution center based on the type of purchase order. For example, for customer purchase orders, the order  
10 router may direct a purchase order to a distribution center based on the destination address for the items. The distribution center thus eliminates the time and expense involved in locating and placing special orders through a variety of different vendors or suppliers for customer-ordered items. The distribution center centralizes the services that may be provided by many vendors or suppliers in a much more efficient and cost-effective manner.  
15 Furthermore, delivery times for customer-ordered items are more predictable because all of a customer's orders are processed through the same system and distribution channel.

Preferably, purchase orders are transmitted daily from the order management system to an order router and then to one or more distribution center computers. Purchase orders that arrive at the distribution center computer 18 are identified by an account number or  
20 identifier for the facility sending the orders. Preferably, the distribution center computer 18 reviews the orders upon receipt and transmits to the order router and then to the order management system a confirmation detailing item availability. For order management systems that process both customer and regular purchase orders, the distribution center computer may transmit updates to the facility database during the same session so the order

management system has current item and pricing information. Alternatively, the distribution center computer may accept the orders, then review them and transmit a confirmation at a later time as well as send database updates at a later time.

Following review and confirmation of the purchase orders, an order "pick" sheet  
5 detailing the items to be delivered is generated and printed by the distribution center computer. For customer purchase orders, the items on the order pick sheet are then prepared by employees of the distribution center for, preferably, next-day shipping (e.g., via overnight delivery by commercially known couriers.) Depending on the customer's preference as noted in the order, items may be shipped to the facility or to the customer's home. If facility  
10 purchase orders are also processed at the distribution center, appropriate shipping arrangements are also made. Time of delivery for the facility's ordered items depends on the type of item, quantity ordered, etc.

Referring to Figure 3, a screen shot 30 of a main menu for a preferred embodiment of an order management system is shown. Similar screens may be used on order management  
15 systems that process both customer and regular purchase orders and those systems that process either customer or regular purchase orders. A facility employee or cashier accesses this screen first when processing purchase orders to be transmitted to the distribution center computer. The main menu 32 displays to the user the options available for selection. Preferably, an option may be selected by choosing the associated letter. Following selection  
20 of a menu option, a screen is automatically displayed or process invoked.

When the "Purchase Order" option of the main menu is selected, the purchase order module of the order management system is invoked and a screen as shown in Figure 4 is displayed to the user 40. In a preferred embodiment of the present invention, the purchase order module is comprised of three (3) edit screens and a display screen. The first screen of

the purchase order module presents to the user ten (10) order partitions that may be used to complete and process orders 42. Associated with each order partition is a status field. Prior to entry of an order, the status field is "Empty." Preferably, the status field changes to "Ready" after items to be ordered are added to the partition and to "Transmitted" after the order is received at the distribution center. Also associated with each partition is a modification field ("Last Change") indicating the last date the partition was edited.

Each partition listed in the partition display screen may be edited by selecting it. Selection of a partition takes the user to an edit screen as shown in Figure 5. Preferably, the edit screen is a form with fields into which the user may enter information. The first field 52 is a "Purchase Order" number. The purchase order number may be entered manually by the user or assigned automatically by the system. If the number entered is associated with an existing order, the items associated with the number may be presented on another screen. Customer orders may be reviewed in this manner after they have been transmitted to (or retrieved by) the facility order management system. In an embodiment of the present invention in which customer and regular purchase orders are processed through the same order management system, a second field 54 may be present. The field is a "Blank" number field that corresponds to a Drug Enforcement Agency form 222C for ordering narcotics. These forms are serially numbered and issued with the name, address, and registration number for the facility and include authorized activity and schedules. Finally, the form may contain a "Special Instructions" field 56 into which the user may enter any processing instructions. The field is provided for informational purposes and is not interpreted by the order management system software.

Following selection of a purchase order or blank number, an order entry form as shown in Figure 6 is displayed. Preferably, the form identifies each item of the order with an

item number or item identifier (such as a facility stock number, distribution center assigned number, or classification number under some other system) and a quantity, description, form strength, size, unit cost, and total cost for item 62. At the bottom of the form, additional fields are displayed 64 to allow the user to add items to the purchase order by entering an  
5 optional department number (if entered, the code is associated with all items on the order), item search criteria, and a quantity to be ordered. The search criteria may include item numbers or item identifiers (if known), order numbers, or partial item descriptions or descriptive terms regarding the item such as generic name or brand name. Finally, the order entry form presents in the bottom right corner a total for the purchase order.

10 In one embodiment of the present invention in which customer and regular purchase orders are processed through the same order management system, the user may perform other tasks while at the order entry form display. For example, selection of a function key 66 may allow the user to review the purchase history associated with a particular item. The purchase history information may assist the user in determining the quantity to be ordered.

15 In an alternative embodiment of the present invention in which customer orders are processed independently of regular purchase orders, a main menu screen may appear as shown in Figure 7. Following selection of the "Order Entry" option, a screen for selecting an individual customer order to review and edit may appear as shown in Figure 8. Preferably, customer orders are accessed using a customer's name. In addition, an order date  
20 and an order status may be tracked and displayed. Finally, the customer's telephone number may be displayed. The telephone number may be useful to facility personnel in informing customers' of the status of their orders or in confirming the need for refilling a subscription order. Following selection of a customer order, a screen for reviewing the ordered items may be displayed as shown in Figure 9. As shown in Figure 9, a unique identifier may be

associated with each customer order. The identifier may be based, for example, on a six-digit facility number (e.g., 359281) appended to a five-digit serial number (e.g., 00029) that is assigned automatically by the order management system. In an embodiment of the present invention in which customer and regular purchase orders are processed through the same order management system and distribution center computer, an "@" sign may be placed at the beginning of the purchase order identifier so that the order is processed appropriately as a customer, and not a regular, purchase order. Information such as the quantity ordered, item number, description, size, unit price, and total price may be tracked and displayed. In addition, a total for the order and for shipping may be displayed at the bottom of the screen.

5

10 Preferably, the screen has a search field so that ordered items may be located using an item number or word description.

In addition to reviewing the items on a customer order, a facility employee accessing the customer orders may enter additional information about the customer through a form as shown in Figure 10. Alternatively, a customer may enter this information while at the kiosk computer. Preferably, this information is entered by a facility employee as it may be difficult and time-consuming for a health care facility customer to enter the information using a touchscreen interface to a keyboard. The information may be entered quickly by a facility employee using a keyboard in communication with the order management system.

15

Referring to Figure 11A, a flow diagram of the primary steps of the present invention is shown. To order one or more specialty health care items, a customer interacts with an electronic catalog via a touchscreen interface to a kiosk computer located at a health care provider facility. Preferably, the electronic catalog contains the same information as may be found in a paper catalog and is arranged similarly. Preferably, the catalog contains items

20

from a large number of vendors thereby giving customers more options with respect to a particular product.

Preferably, the electronic catalog is comprised of hierarchical menus from which the user makes selections. A user interacts with the touchscreen interface to the electronic catalog by touching buttons (i.e., icons) that represent various available options. In a preferred embodiment of the present invention, the first screen of the electronic catalog presents introductory information and a "table of contents" button to a user 70. After selecting the table of contents button, a list of categories or items that may be of interest to the user is presented. Examples of top-level categories include "Medication Guide" or "Diseases & Illnesses." Instructions on the screen may ask the user to "Touch a category of interest." Selection of a top-level category may result in the presentation of additional category buttons from which the user may choose. Alternatively, a user may enter selection criteria such as a partial description of an item (e.g., the words "metal crutches") and select a "Touch to Find" button. The electronic catalog then searches for items meeting the search criteria and displays the results to the user.

As the user makes selections through the menu hierarchy, the categories may be more specific or detailed. In addition, the user may be prompted to respond to specific queries to locate items. Categories 72 from which the user may choose 74 are presented until product or specific item information that meets the user's selection criteria may be presented 76. Within a category, several pages of items belonging to the general category may be presented. The user may navigate through the pages of items by selecting "Go Back" and "Next Product Page" buttons that may appear on each screen. Several items may appear on each catalog page. Items within a specific product category, preferably, have an identifier (e.g., in words,) and a graphic (i.e., picture). Referring to Figure 12, an example of a catalog

page of several items for a preferred embodiment of the present invention is shown. Referring to Figure 13, an example of a catalog page of a single item for a preferred embodiment of the present invention is shown. A large graphic of the item as well as a detailed description of the item may be displayed. User options may include ordering the product ("Order Product"), reviewing other products ("Previous Product"), or returning to another part of the catalog ("Go Back" or "Table of Contents").

Referring again to Figure 11A, following presentation of item information to the user 78, the user may be prompted to order an item appearing on the screen or navigate to a different page or category. The user's response is read 80 next. The user may either order the requested item (e.g., by selecting an "Order Product" icon) or continue perusing the pages of item information 82. If the user chooses not to order an item 84, the user may continue perusing items 78 or review additional product categories 76.

If the customer decides to order an item, the customer may be prompted for additional information to complete the order. For example, the customer may be asked to provide a quantity for the order. Referring to Figure 14, an example of an order item page for a preferred embodiment of the present invention is shown. A quantity, description, and price for each item may be displayed. Preferably, the user may select any of the items listed on the page to remove it from the order or to change the quantity for the item. Following review of the items and completion of the order, the user may submit or acknowledge the order by selecting the "Submit Order" icon.

In another aspect of the present invention, a customer may select an option to place a subscription order. A "subscription" order is an order that is re-executed at a known frequency or interval (e.g., weekly, monthly, bi-monthly, etc.) A customer who consumes an item at a regular rate may wish to place a subscription order. For example, a customer who



uses a daily nutritional supplement may wish to order a case each month. The customer may place the order as a subscription order so that at the end of every month, an order for one case of the nutritional supplement is executed. Then, on the first day of the next month, the customer may go to the facility to get the case or if arrangements for home delivery were made, the case may be delivered to the customer's home. The ability to process and fill customer subscription orders for specialty health care items is unique to the present invention.

Within the order management system, subscription orders are tagged or identified as subscription orders so that they are not deleted when filled. A subscription order may be tagged, for example, with a special character or with a certain value in one field of the order. A "renewal" or "subscription" field associated with the order may contain a value indicating a renewal interval. For example, the renewal field may contain a value of 0 for regular (facility or customer) orders, a value of 1 for weekly subscriptions, a value of 2 for semi-monthly subscriptions, a value of 3 for monthly subscriptions, etc. If an order has a non-zero value in the "renewal" or "subscription" field, the order is not deleted when filled. A date field that indicates the last date on which an order was placed or the date an order is to be placed may also be associated with subscription or renewal orders. The order management system may then compare the date field on the remaining subscription orders with the current date to determine whether the order intervals for any subscription orders have passed. Alternatively, the renewal field may contain the date on which the subscription order may be re-submitted for processing. In this case, the date in the renewal field is determined on the day the order was last filled and is based on the last order date plus the renewal interval. The order management system then reviews the renewal field and preferably, sends a reminder or notification message to a facility employee to indicate there

are pending subscription orders to be processed. The renewal field may be checked and a reminder sent daily, weekly, etc. The reminder may appear at the bottom of a regular order entry screen or appear as a flash on a regular order entry screen. The facility employee may then access the customer order screen and contact each customer who has placed a  
5 subscription order to determine whether the refill order is to be placed. The subscription orders may then be transmitted to the order routing and distribution center computers so they may be filled that day. Alternatively, subscription orders may be refilled automatically without confirmation by a facility employee.

Other order information may include the method of payment and a preferred delivery  
10 option. For example, the customer may request that the item be delivered to her home. Alternatively, the customer may arrange to pick up the item from the health care provider facility. In either case, arrangements are made for next-day delivery of the item. Next-day delivery of customer order items is facilitated by the location of distribution centers throughout the country that warehouse general and specialty health care products from a  
15 variety of different vendors. The distribution centers may also warehouse prescription and non-prescription items that the facility stocks regularly so that the regular purchase orders of health care provider facilities throughout the country may be serviced in addition to customer purchase orders.

Referring again to Figure 11A, after providing the necessary order information, a  
20 customer may order additional items or submit the order for processing 88. If the customer chooses to order additional items, she may continue perusing the pages of item information 84, 78 or she may return to perusing product categories to locate other types of products 84, 76. Referring now to Figure 11B, if the customer chooses to submit the order for processing, the order is tagged as a customer purchase order transmitted to or retrieved by

the order management system 50. An order is tagged by attaching a marker or identifier to, for example, one of the fields of the order. In a preferred embodiment of the present invention, an "@" sign is placed at the beginning of the order to indicate it is a customer rather than a regular facility order. The application programs of the present invention that participate in the processing of orders are designed to recognize the distinction between the types of orders so they may be processed appropriately. For example, a cashier or facility employee may request to see all of the customer orders placed during the day. The application program for locating and presenting customer orders may locate the customer orders based on the presence of the "@" sign.

10 After the customer order has been transmitted to or otherwise retrieved by the order management system, the customer may make arrangements to pay for the ordered item(s). The pharmacist or cashier may first access the order and review it with the customer 92 and then accept the customer's payment (e.g., cash or credit card.) The customer may also be asked to provide a name, address, health information, insurance information, etc. The information regarding the identity of the customer (name, address), payment information, insurance information, and health information represents customer data that may be associated with a customer purchase order. Although the customer may enter this information through the kiosk computer, use of the touchscreen keyboard may be difficult and time-consuming so it is more efficient to have the facility employee enter the additional information using a keyboard in communication with an order management system. In an embodiment of the present invention in which customer and regular orders are processed through the same order management system, the cashier may also review regular orders that may need to be placed to re-stock non-prescription and prescription items that the facility ordinarily carries.

After reviewing orders at the order management system, the orders are transmitted to one or more distribution center computers through an order router. Preferably, the orders are transmitted daily to the distribution center so arrangements may be made for next-day delivery of items. The receiving distribution center computer reviews the orders and transmits a confirmation to the facility order management system 86 either during the same session or later during a session established by the distribution center computer to the facility order management system. During the confirmation session, electronic catalog updates for the facility order management system database and customer order kiosk database may also be uploaded to the facility order management system. The changes to the customer order database may then be transmitted from the facility order management system to the customer order database via a local area network connection.

Following confirmation of the orders, the distribution center computer generates and prints a "pick" sheet 98 that an employee of the distribution center may follow to fill the customer and regular orders 100, if present. Customer orders and regular purchase orders may be separated for processing as the shipping destinations for customer orders may differ. For a customer order, arrangements may be made to deliver the requested item to the customer's home or the facility depending on the customer's preference. In either case, the item may be available to the customer within one or two days after it was ordered. If the distribution center also processes regular purchase orders, employees of the distribution center may also make arrangements to ship the ordered items to the facility.

The ability to generate and process customer orders for specialty and regular health care products that are filled through a distribution center is unique to the present invention. The ability to process customer orders for specialty and regular health care products through an order management system capable of communicating with a distribution center computer

results in significant benefits to both health care provider facilities and their customers. The ability to provide to customers the information they need to make a purchase and to quickly and efficiently fill customer orders effectively expands the floor space and hence, the selling capacity of the facility. By perusing the electronic catalog, customers may learn about items and compare them as though the items are physically present at the store. The facility is able to provide the information about products and quickly deliver them to the customer (through the distribution center) without having to actually stock them. The present invention takes advantage of an extensive product distribution network designed to serve health care provider facilities and to further serve the individual customers of the facilities. The use of existing computer systems and distribution channels results in operational efficiencies so that health care provider facilities may easily offer the features and benefits of the present invention to their customers.

## WHAT IS CLAIMED IS:

1. A system for processing purchase orders comprising:
  - an electronic catalog containing a plurality of items available for purchase;
  - a customer purchase order containing an item identifier for at least one item from said electronic catalog;
  - an order management system adapted to receive said customer purchase order and to accept customer data associated with said customer purchase order; and
  - a distribution center computer adapted to receive and display said customer purchase order and said customer data.
2. The system of claim 1 wherein said items are specialty and general health care products.
3. The system of claim 1 wherein said electronic catalog is contained in a computer kiosk located at a health care provider facility.
4. The system of claim 1 wherein said electronic catalog has a touchscreen interface.
5. The system of claim 1 wherein said customer purchase order is a subscription order.
6. The system of claim 1 wherein said order management system is co-located with said electronic catalog.
7. The system of claim 1 further comprising an order router for transmitting said customer purchase order from an order management system to a distribution center computer.
8. The system of claim 1 wherein said electronic catalog and said order management system communicate via a local area network connection.
9. The system of claim 1 wherein said customer purchase order is stored in an ASCII file at a computer containing said electronic catalog and said customer purchase

- order is retrieved by said order management system through file sharing.
10. The system of claim 1 wherein said customer purchase order is retrieved by said order management system using a remote procedure call.
  11. A system for processing purchase orders comprising:
    - an electronic catalog containing a plurality of items available for purchase;
    - a customer purchase order containing an item identifier for at least one item from said electronic catalog;
    - a health care provider facility purchase order;
    - an order management system adapted to receive and process said customer purchase order and said health care provider facility purchase order; and
    - at least one distribution center computer adapted to receive and process a plurality of customer purchase orders and health care provider facility purchase orders.
  12. The system of claim 11 wherein said items are specialty and general health care products.
  13. The system of claim 11 wherein said electronic catalog is contained in a computer kiosk located at a health care provider facility.
  14. The system of claim 11 wherein said electronic catalog has a touchscreen interface.
  15. The system of claim 11 wherein said customer purchase order is a subscription order.
  16. The system of claim 11 wherein said electronic catalog and said order management system communicate via a local area network connection.
  17. The system of claim 11 further comprising an order router for transmitting said customer purchase order from an order management system to a distribution center computer.

18. The system of claim 11 wherein said customer purchase order is stored in an ASCII file at a computer containing said electronic catalog and said customer purchase order is retrieved by said order management system through file sharing.
19. The system of claim 11 wherein said customer purchase order is retrieved by said order management system using a remote procedure call.
20. The system of claim 11 wherein said order management system and said at least one distribution center computer communicate via a wide area network connection.
21. The system of claim 1 wherein said customer purchase order is stored in an ASCII file at a computer containing said electronic catalog.
22. The system of claim 1 wherein said customer purchase order is retrieved by said order management system using a remote procedure call.
23. A method for electronically generating and processing purchase orders, said method comprising the steps of:
  - (a) reviewing information regarding a plurality of items in an electronic catalog;
  - (b) selecting at least one item from said electronic catalog;
  - (c) transmitting a customer purchase order for said at least one selected item from a device containing said electronic catalog to an order management system;
  - (d) entering into said order management system information for a health care provider facility purchase order;
  - (e) transmitting said customer purchase order and said health care provider facility purchase order to a distribution center computer adapted to transmit a confirmation of said customer and health care provider facility purchase orders to said order management system and to generate a pick sheet for said customer and health care provider facility purchase orders.



24. The method of claim 23 further comprising the step of arranging for delivery of items from said health care provider facility purchase order to a health care provider facility.
25. The method of claim 23 further comprising the step of arranging for deliver of items from said customer purchase order to a customer.
26. The method of claim 23 wherein said items are specialty and general health care products.
27. The method of claim 23 wherein said electronic catalog is contained in a computer kiosk and has a touchscreen interface.
28. The method of claim 23 wherein said customer purchase order is a subscription order.
29. The method of claim 23 wherein said customer purchase order is transmitted to said order management system through a local area network connection.
30. The method of claim 23 wherein said customer and health care provider facility purchase orders are transmitted to said distribution center computer through a wide area network connection.
31. The method of claim 23 wherein said customer and health care provider facility purchase orders are transmitted to said distribution center computer through an order router.
32. A method for electronically generating and processing purchase orders, said method comprising the steps of:
  - (a) reviewing information regarding a plurality of items in an electronic catalog;
  - (b) selecting at least one item from said electronic catalog;
  - (c) generating a customer purchase order for said at least one selected item; and

- (d) transmitting said customer purchase order to a distribution center computer adapted to transmit a confirmation of said customer order to said order management system and to generate a pick sheet for said customer order.
33. The method of claim 32 further comprising the step of arranging for delivery of items from said customer purchase order to a customer.
34. The method of claim 32 wherein said items are specialty and general health care products.
35. The method of claim 32 wherein said electronic catalog is contained in a computer kiosk and has a touchscreen interface.
36. The method of claim 32 wherein said customer purchase order is a subscription order.
37. The method of claim 32 wherein said customer purchase order is transmitted to said order management system through a local area network connection.
38. The method of claim 32 wherein said customer purchase order is transmitted to said distribution center computer through a wide area network connection.
39. The method of claim 32 wherein said customer purchase order is transmitted to said distribution center computer through an order router.
40. A method for processing purchase orders comprising the steps of:
- (a) reviewing information regarding a plurality of items in an electronic catalog;
  - (b) selecting at least one item from said electronic catalog;
  - (c) generating a customer purchase order for said at least one selected item, said customer purchase order including a value in a renewal field;
  - (d) transmitting said customer purchase order to an order management system adapted to forward said customer purchase order to a distribution center

computer adapted to transmit a confirmation of said customer order to said order management system and to generate a pick sheet for said customer order;

(e) storing said customer purchase order at said order management system; and

(f) transmitting said customer purchase order from said order management system to said distribution center computer in accordance with said value in said renewal field.

41. The method of claim 40 wherein said items are specialty and general health care items.

42. The method of claim 40 wherein said value in said renewal field is a date said customer purchase order was last transmitted to said distribution center computer plus a renewal interval.

43. The method of claim 40 wherein said value in said renewal field is an identifier for a renewal interval.

44. The method of claim 44 wherein said order management system compares said value in said renewal field plus a date said customer purchase order was last transmitted to said distribution center computer with a current date.

45. A system, comprising:

a touchscreen kiosk including an electronic catalog of health care products;

means for interfacing said kiosk with a product order data processor;

means for interfacing said product order data processor with a second data processor associated with a product distribution center to inform said distribution center of particular product orders made by customers; and

means for delivering said products to said customers who have ordered said products via said kiosk.

1/13

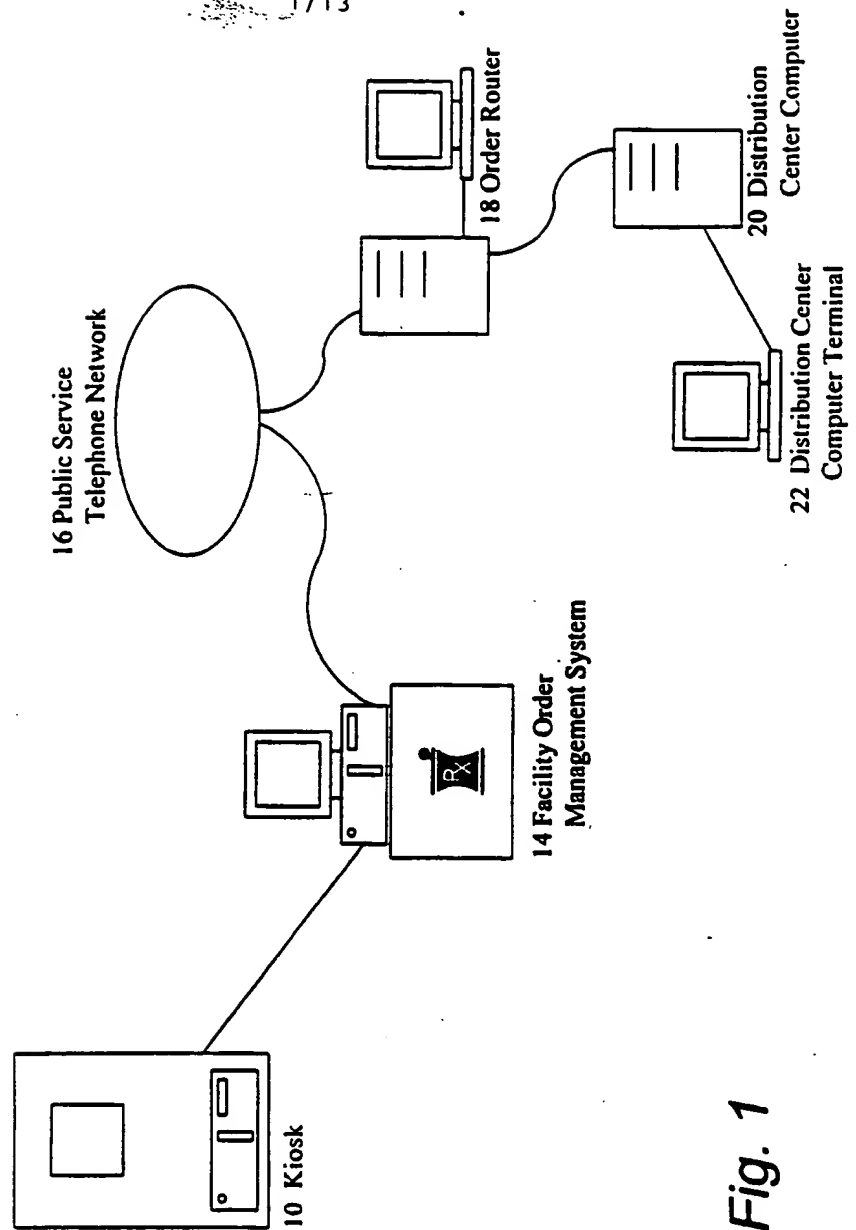


Fig. 1

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ORDER SELECTION

CHOICE PHARMACY  
LINE: 1 COLUMN: 1 0% INSERT: ON INDENT: ON

IMPORT DATA FILE

PO663444  
IT148377005  
IT837350020  
:TESTING THE COMMENTS LINE

ESC-EXIT FI-HELP F2-SAVE

*Fig. 2*

MAIN MENU

CHOICE PHARMACY  
MENU SELECTION

[A] PURCHASE ORDER  
[B] TRANSMIT AND RECEIVE MENU  
[C] PRINT DOCUMENTS MENU  
[D] REPORTS MENU  
[E] ITEM MAINTENANCE  
[F] INVENTORY MENU  
[G] CREDIT REQUEST  
[H] UTILITY MENU

CREATE AND REVISE PURCHASE ORDERS, WORKSHEETS.

ESC-EXIT ENTER-SELECT ↑↓-MOVE BAR FI-HELP

*Fig. 3*

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40

42

**Fig. 4**

ORDER SELECTION			
CHOICE PHARMACY			
	PARTITION	STATUS	PO. NUMBER
[A]	ORDER ENTRY 1	EMPTY	LAST CHANGE
[B]	ORDER ENTRY 2	EMPTY	07-12-1995
[C]	ORDER ENTRY 3	EMPTY	06-13-1995
[D]	ORDER ENTRY 4	EMPTY	07-12-1995
[E]	ORDER ENTRY 5	EMPTY	06-13-1995
[F]	ORDER ENTRY 6	EMPTY	07-12-1995
[G]	ORDER ENTRY 7	EMPTY	06-13-1995
[H]	ORDER ENTRY 8	EMPTY	03-01-1993
[I]	ORDER ENTRY 9	EMPTY	03-01-1993
[J]	ORDER ENTRY 10	EMPTY	03-01-1993

ESC-EXIT ENTER-SELECT F1-HELP F6-STATUS F9-ERASE F10-UTILITY FUNCTION

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ORDER SELECTION	
CHOICE PHARMACY	
52 54 56	PURCHASE ORDER # 0613591 _____ BLANK # _____ SPECIAL INSTRUCTIONS: _____
ESC-EXIT    END, ENTER-CONTINUE    F1-HELP    F3-IMPORT DATA	

50

*Fig. 5*

60

ORDER SELECTION																																														
CHOICE PHARMACY	P.O. # 0613951																																													
<div style="display: flex; justify-content: space-between;"> <span>N CARDINAL</span> <span>62</span> </div> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">D</th> <th style="text-align: left;">QTY</th> <th style="text-align: left;">ITEM NO</th> <th style="text-align: left;">DESCRIPTION</th> <th style="text-align: left;">FORM</th> <th style="text-align: left;">STRGTH</th> <th style="text-align: left;">SIZE</th> <th style="text-align: left;">COST</th> <th style="text-align: left;">\$ EXT</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>5</td> <td>084859</td> <td>PANOXYL 5</td> <td>GEL 5 %</td> <td></td> <td>120GM</td> <td>13.31</td> <td>66.55</td> </tr> <tr> <td>Y</td> <td>2</td> <td>082090</td> <td>TAGAMET</td> <td>TABS 200MG</td> <td></td> <td>100</td> <td>62.34</td> <td>124.68</td> </tr> <tr> <td>Y</td> <td>3</td> <td>056332</td> <td>TYLENOL</td> <td>TABS 325MG</td> <td></td> <td>50</td> <td>3.58</td> <td>10.74</td> </tr> <tr> <td>Y</td> <td>3</td> <td>589101</td> <td>ZANTAC</td> <td>SYRN 25MGML</td> <td></td> <td>2 ML</td> <td>4.37</td> <td>13.11</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>DEPT _____</span> <span>ITEM SEARCH <span style="border: 1px solid black; display: inline-block; width: 80px; height: 15px;"></span></span> <span>QTY _____</span> <span>P.O. VALUE - 215.08</span> </div>		D	QTY	ITEM NO	DESCRIPTION	FORM	STRGTH	SIZE	COST	\$ EXT	Y	5	084859	PANOXYL 5	GEL 5 %		120GM	13.31	66.55	Y	2	082090	TAGAMET	TABS 200MG		100	62.34	124.68	Y	3	056332	TYLENOL	TABS 325MG		50	3.58	10.74	Y	3	589101	ZANTAC	SYRN 25MGML		2 ML	4.37	13.11
D	QTY	ITEM NO	DESCRIPTION	FORM	STRGTH	SIZE	COST	\$ EXT																																						
Y	5	084859	PANOXYL 5	GEL 5 %		120GM	13.31	66.55																																						
Y	2	082090	TAGAMET	TABS 200MG		100	62.34	124.68																																						
Y	3	056332	TYLENOL	TABS 325MG		50	3.58	10.74																																						
Y	3	589101	ZANTAC	SYRN 25MGML		2 ML	4.37	13.11																																						
ESC-EXIT    F1-HELP    F7-SUGGEST AWUS ORDER    F10-UTILS    F11-EDIT    F12-STACK																																														

64

66

*Fig. 6*

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MS-DOS PROMPT - MENU		-	OK
TIOX16	▼	□	□
□	□	□	A

MAIN MENU	
WEST END PHARMACY	
MENU SELECTION	
[A]	ORDER ENTRY
[B]	TRANSMIT AND RECEIVE
[C]	PRINT DOCUMENTS
[D]	CARBON COPY HOST MODE
[E]	REMOVE CARBON COPY
VIEW, MODIFY AND DELETE CUSTOMER ORDERS.	
ESC-EXIT ENTER-SELECT ↑-MOVE BAR FI-HELP	

Fig. 7



**Fig. 8**

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[illegible]

**Fig. 9**

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MS - DOS PROMPT - CARENT	- 0 X
T O X I 6 ▾ □ □ □ □ □ □ A	

**CUSTOMER/ORDER INFORMATION**

---

**SHIP TO INFO**

FIRST/MI/LAST : HENRY    FORD

ADDRESS : 1212 FOX TRAIL

SUITE 350

CITY/STATE/ZIP : COLUMBUS OH 42900 PHONE: 800-555-1213

NNN-NNN-NNNN

CREDIT CARD ( ) :      EXPIRES:      SHIP UPS

**ORDER SELECTION**

**ESC-EXIT END-SAVE FI-HELP F2-SHIPPING**

**Fig. 10**

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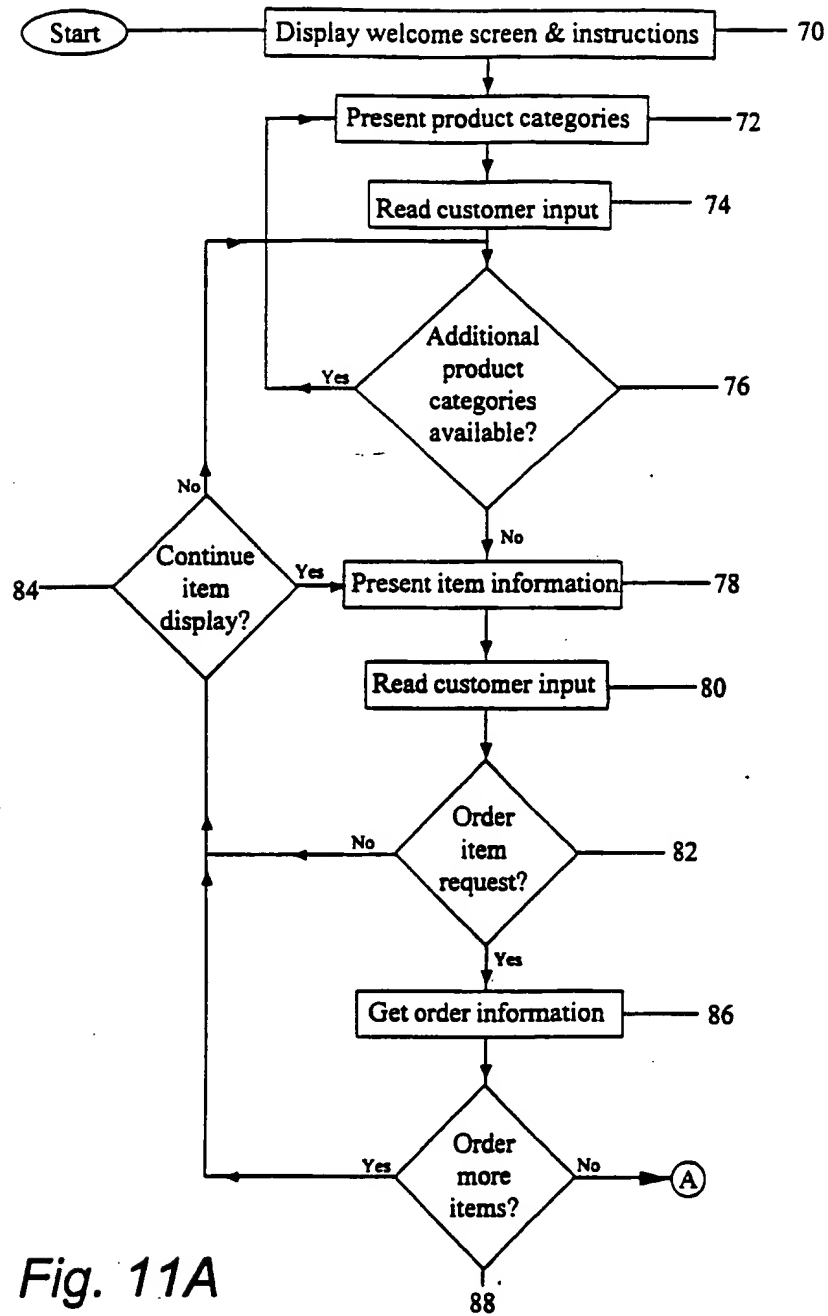
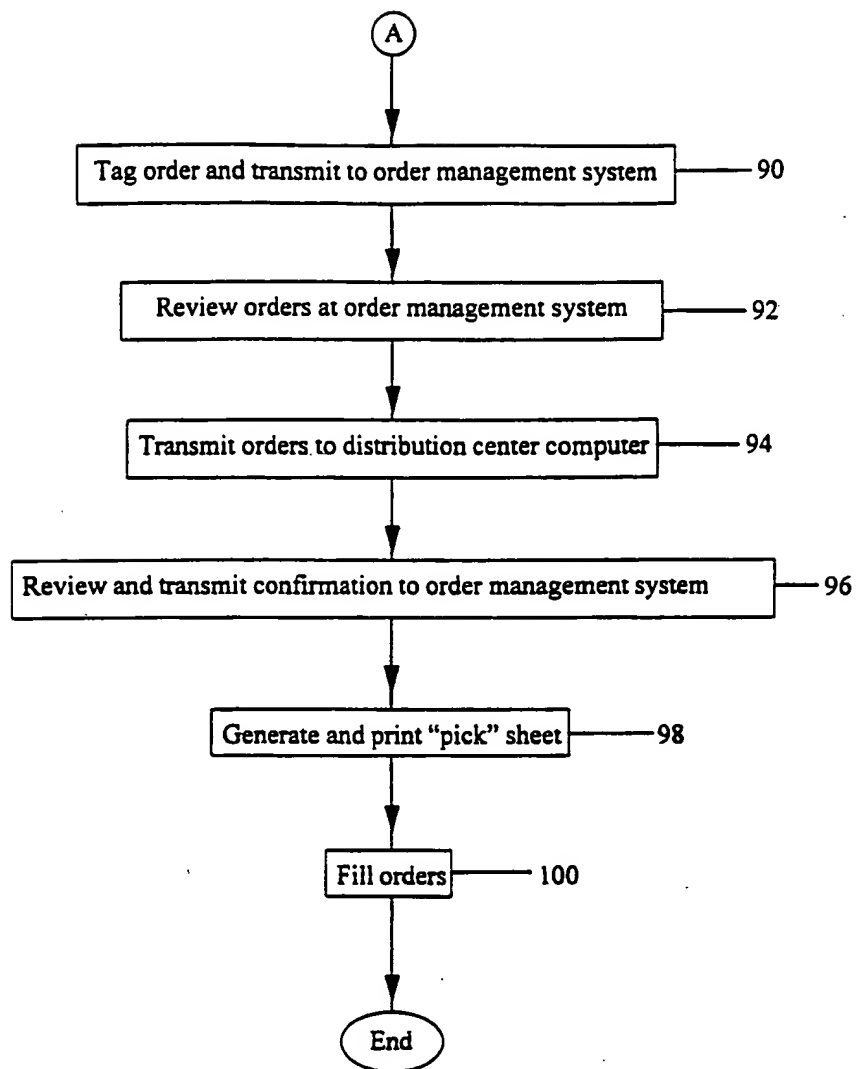


Fig. 11A

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*Fig. 11B*

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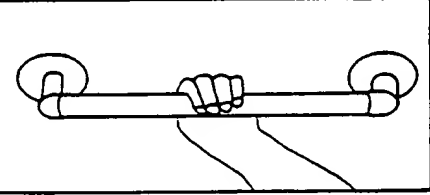
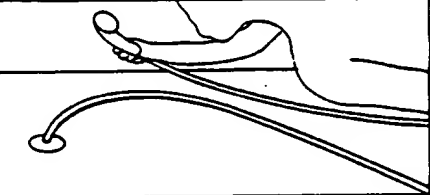
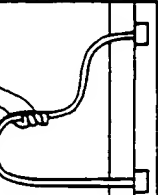
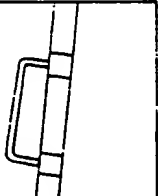
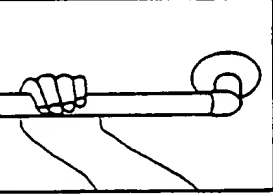
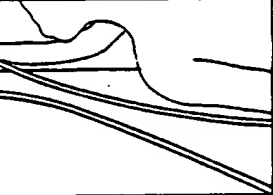
	<p>BATHROOM</p>				<p>EXIT CATALOG</p>	<p>ORDER DESK</p>	<p>TABLE OF CONTENTS</p>	<p>GO BACK</p>				
<p>FUTURO® WHITE WALL GRAB BARS</p> 					<p>HAND-HELD SHOWER SPRAY</p> 	<p>BATH-SAFETY RAIL - HI-LO</p> 	<p>PORTABLE BATHTUB RAIL</p> 	<p>FUTURO® SHOWER STOOL WITH BACK</p> 	<p>PORTABLE BATH BOARD</p> 	<p>NEXT PRODUCT PAGE</p>	<p>MORE INFO</p>	<p>MEDI- CARE</p>

Fig. 12

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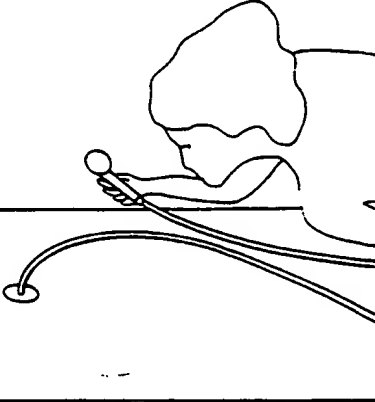

 <div data-bbox="665 1312 760 1549">EXIT CATALOG</div> <div data-bbox="776 1312 870 1549">ORDER DESK</div> <div data-bbox="886 1312 980 1549">TABLE OF CONTENTS</div>	<div data-bbox="565 919 636 1276">BATHROOM HAND-HELD SHOWER SPRAY</div> <div data-bbox="678 907 701 1255">THE WHOLE FAMILY CAN ENJOY...</div> <div data-bbox="701 907 993 1255">  </div> <div data-bbox="971 907 993 1255">EASY TO USE IN MOST SHOWERS</div>	<div data-bbox="1101 415 1192 835">ORDER PRODUCT</div> <div data-bbox="1208 991 1299 1255">PREVIOUS PRODUCT</div> <div data-bbox="1208 844 1299 970">MEDI-CARE</div> <div data-bbox="1208 709 1299 835">MORE INFO</div> <div data-bbox="1208 415 1299 680">NEXT PRODUCT</div>
<div data-bbox="1208 1312 1299 1549">GO BACK</div>		

Fig. 13

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TABLE OF CONTENTS		S* MD**		UNIT PRICE	PRICE
QUAN-TITY	PRODUCT				
3	HAND-HELD SHOWER SPRAY	NO		28.79	\$ 86.37
1	BATH SAFETY RAIL, HI-LO	NO		70.79	\$ 70.79
1	FUTURO SHOWER STOOL WITH BACK	NO		38.89	\$ 39.89
S* - SUBSCRIPTION MD**1 MEDICARE ITEM					TOTAL PRICE \$197.05



EXIT CATALOG

ORDER DESK

TABLE OF CONTENTS

GO BACK

REMOVE  
SELECTED ITEM

SUBMIT ORDER

Fig. 14



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/24101

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(6) : G06F 151:00, 17/60 US CL : 705/15, 16, 26, 27 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 705/15, 16, 26, 27 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS, DIALOG catalogue, purchase order, requisition, health care, pharmacy, doctor, clinic		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P --- Y,P	US 5,694,551 A (DOYLE ET AL) 02 December 1997, col. 3, lines 8-67.	1 --- 2-43, 45
Y	MANSELL-LEWIS. E. Bristol hospitals put their trust in unix database at the Purchasing & Supply Management. December 1993. pages 1-4	2-43, 45
Y,P	US 5,592,378 A (CAMERON ET AL) 07 January 1997, see entire document.	3-43, 45
Y	US 5,353,219 A (MUELLER ET AL) 04 October 1994, see entire document.	3-43, 45
A	US 5,235,509 A (MUELLER ET AL) 10 August 1993, see entire document.	3-43, 45
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "B" earlier document published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "A" document member of the same patent family		
Date of the actual completion of the international search 02 APRIL 1998		Date of mailing of the international search report 07 MAY 1998
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer GAIL HAYES <i>Jan</i> Telephone No. (703) 305-9711

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/24101

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☒ Claims Nos.: 44  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
  
A claim can not depend upon itself.
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.